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ABSTRACT

Significant findings concerning the efficacy of individualized instruction techniques and type of instructional setting were generated by this study of Title I programs. Variables for the study were chosen because policy-makers were concerned about them and had the power to do something about them. The variables studied were individualized instructional techniques, teacher training, instructional setting, and costs, but findings concerning teacher training and costs were not reported. On the variable of individualized instruction, the study found that no one practice or combination of practices was more effective. Policy implications of these findings are that no particular approach ought to be required by law. Concerning the variable of instructional setting, findings indicate that where differences in effectiveness were found between "pull-out" instruction and mainstreaming, educational gains in the mainstream setting were always significantly larger. Policy implications of these findings are not sweeping because the study did not cover a representative sample of districts and because mainstreaming may cause problems for some teachers, yet the findings can be used to stimulate further thinking on how to provide mainstream instruction. Finally, data suggest the tentative conclusion that at least in some classrooms in some districts, Title I is helping children learn. (Author/JM)

POLICY IMPLICATIONS OF THE INSTRUCTIONAL DIMENSIONS STUDY

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On the face of it, the biggest policy-relevant question about compensatory instruction would seem to be, "Does it work?" That is, does the Title I program, as a whole, help children exposed to it, to learn in school. This question, however, is one which NIE not only did not answer, it is one which we chose not to answer. Why did we make this decision? For three major reasons.

First, Title I funds a variety of services and within a single instructional area is used for programs widely divergent in focus, content, and duration. It is not logically possible, therefore, to provide a single index of program impact.

Second, because of these differences, a national evaluation of even a single instructional area poses problems as the data collection requirements are enormous. Implementation of such a study on a national level, even if possible conceptually, was not possible practically given the cost constraints under which we were working.

Third, our job was to help improve Title I. In this part of the study, we took this to mean that we should investigate promising approaches. National surveys work best for questions about programs which are typically available. The most promising programs might or might not be widely used. Our quest was not to be able to give Title I a report card grade in response to "Does it work?" Instead, it was to advance systematic inquiry into the question: "Can it work"?

We needed, therefore, a different approach, one which would provide information on specific variables which had two characteristics: (1) policymakers were concerned about them and (2) policymakers had the potential for doing something about them through tools available at the

Federal level, such as legislative or regulatory changes. With these criteria in mind, NIE selected a fairly limited set of program variables for detailed study -- individualized instructional techniques, teacher training, instructional setting, and cost. While this particular set of variables would in all likelihood have also been considered important had we taken some other orientation than one based on policy concerns, a major reason for their selection was their importance as policy issues.

Before going on to talk about the policy implications of our findings, we would like to say a little more about these four variables. And, in case there are some doubts about why, or even whether, these are in fact policy variables, we will summarize briefly why each was selected.

Individualized Instruction: During the debates over the reauthorization of Title I in 1974, Congress heard testimony suggesting that individualized instruction, especially diagnostic and prescriptive techniques, are unusually effective. Some consideration was given to mandating the use of such techniques for Title I instruction. This was not carried out. Instead, further study was called for, with the NIE being directed to examine the effectiveness of individualization for compensatory education students as a part of its Compensatory Education Study mandate.

It should be noted that the definition of individualization included in the mandate was not precise. The exact phrase used was "individualized written lesson plans", only one aspect of what many would call individualization. In order to understand better what exactly the Hill folk had in mind, we spent some time discussing the problem with Committee staff. In the end we focussed on what some might call "direct instruction" or what we call diagnostic and prescriptive instruction. It had three things

going for it: (1) Congress was interested in it and could do something about it, (2) there was a fair amount of evidence that it had a positive impact upon achievement, and (3) it could be examined in a fairly straight-forward manner.

Teacher Training: The Congressional mandate also specified that we examine issues in the area of teacher training. Again, discussion was needed to clarify Congressional intent. We found that two types of teacher training issues were of concern to policymakers. First, were Title I funds being used to provide special training for compensatory education teachers? (They are, but not to any great extent.) And second, does training make a difference? We must say that we were somewhat hesitant to get into this second area, as research attempting to link teacher qualifications/experience and learning outcomes has produced such inconsistent results. We finally did include a brief look at this question in the Instructional Dimensions Study. We are sorry to say that our analyses produced little to enlighten the field.

Instructional Setting: The emergence of instructional setting as a policy variable of interest followed a quite different course. When we were developing our overall design for the NIE Compensatory Education Study, of which IDS is a part, we held a series of meetings with state and district personnel to gather their insights into the area/issues the NIE study should address. An area which repeatedly surfaced was problems caused by the practice of pull-out instruction . Many irate teachers and administrators cursed the Title I rules for forcing them to use the pull-out mode. (The rules, by the way, do not include such a requirement.) We decided as a result of these conversations that an investigation of instructional settings, if and how they relate to achievement, would be important.

In our research plans submitted to Congress we therefore proposed a look at the effects of setting. This proposal was accepted.

Cost: The importance of cost as a policy variable probably needs little explanation. Suffice it to say we considered it important to have cost data on the practices whose effectiveness we were examining. We wanted to be able to say, for example, whether more effective programs were more or less costly. We also wanted this data in order to assess the practicality of attempting to replicate particularly effective practices on any large scale.

Study Findings and Their Implications

In this discussion of the policy implications of IDS findings we're going to focus on two of the variables considered above--individualized instruction and instructional setting. We're ignoring cost and teacher training because the findings in these areas tended to be non-findings. (They are amply documented in the final study report produced by Kirschner et al.) In addition, upon further examination of these data we frankly find them to be generally rather non-thought provoking as well. The paper written for this panel by Margot Nyitray and Joy Frechtling does, however, contain some additional observations on cost analysis and what we have learned from a slightly different perspective.

Looking first at individualized instruction, let us repeat that our analyses to date have not revealed any practice or combination of practices to be more effective than others. The most surprising finding was how well the CE students were doing across all our programs. While the possibility remains that additional analyses will yield some more clear cut relationships, our findings in this area are consistent with a number of recent studies which show that lots of different instructional approaches can work. Further, we suspect that any relationships we might uncover, because of their level of complexity, would probably be of more relevance and interest to educators and educational researchers than to the policy-making audience. What then are the implications of our current findings from the policy standpoint? Are our non-findings here more thought-provoking than those in other areas?

We think the answer is "yes" and that our data in this area can be of use in the policymaking process. Basically, the IDS findings reinforce

the notion that instruction is a very complex process, which cannot now and may never be reduced to some formula describing "what works." We simply don't know enough to require through law that certain approaches be used.

Further, the IDS data suggest that what might be called "management-planning" variables may well play the critical role. Within reasonable limits, well planned and managed instructional programs using a variety of approaches may be successful. Of course, we are admittedly a little hazy on how to define good planning and management, although we do have some starting points, and pronouncements in this area would also be premature. Nonetheless, there is enough evidence floating around to make a closer look at variables such as principal and teacher participation in planning, stability and implementation levels of programs, and coordination among teachers, a critical part of future examinations of what works.

Turning to Instructional Setting, it is fair to say that our research has been useful and our comparisons of the achievement gains of students given mainstream instruction to those of students given pull-out instruction have in fact been able to inform policy debate. Last Fall, on the basis of analyses available, we indicated to Congress that pull-out instruction was not necessarily superior to mainstream. Our data showed mainstream instruction to be superior in the first grade for both reading and mathematics, pull-out instruction to be superior to third grade mathematics, and no differences in effectiveness fo third grade reading. Now, as has been noted, rechecking and cleaning of the data changes the picture slightly and the advantage of mainstream instruction appears even greater. Where differences are found (i.e. in first grade reading and math and third grade reading) gains in the mainstream setting were always significantly larger.

What can we say from these data? Should we amend our previous statements to Congress, taking an even more aggressive stand in favor of the mainstream approach? Our answer is "no". Despite our revised findings we do not feel that a swing of the pendulum is called for and we would be uncomfortable concluding from the IDS data that districts should use only the mainstream approach.

There are a number of reasons for taking what might be labeled a conservative stand. First, because the IDS findings are based on data from districts that were "special" and not nationally representative especially with regard to using mainstreaming, we are hesitant to conclude that other districts would necessarily be as successful. Second, despite our data and other relevant information summarized recently by Dr. Glass, we have a gut feeling that mainstreaming may pose problems for many teachers and simply may not be possible in some instances. We don't have any available "models" for delivering CE instruction in this fashion nor is there sufficient information on how to prepare teachers for what can be a very complex classroom management situation. It seems important to make progress in these areas before pushing for more widespread use of the approach. Finally, our research needs replication and further analyses. The IDS, despite all its virtues, is only one study, and convergent evidence from other work is not yet strong enough. If the IDS data is used in support of an open policy towards instructional setting, if it is used to stimulate further thinking on how to provide mainstream instruction, we think the study can be said to have served a very valuable policy function.

There is one further issue which we have not focussed on yet but which bears mention. The IDS data seems to indicate that, at least in some classrooms in some districts, Title I is helping children learn. We must be cautious about the conclusions we draw from this as the IDS was not designed to provide an overall evaluation of how the national Title I program is working. Nonetheless, in our sample classrooms the CE students were found to do well on a school year basis and new data which is just being analyzed suggests that impressive gains exist on a 12 month basis as well. The large summer drop-off effect reported in previous analyses does not seem to be replicated here. These findings represent a hopeful change from the previous ones that have found little or no impact on achievement associated with Title I participation.

We have done some speculation on why these findings differ from the others. Clearly, we cannot rule our absolutely explanations such as sample bias and artifacts of the particular achievement test being used. However, it is just possible that after 10 years of practice some programs in some places are actually becoming more effective. The policy implications of such a finding would indeed be tremendous.